

**REMARKS**

Claims 1 and 8 are amended herein to recite that the photocatalyst has a capsule structure comprising a cadmium compound shell and a void as supported on page 9, lines 17-18 of the original specification. No new matter is presented. Accordingly, upon entry of the Amendment, claims 1-23 will be all of the claims pending in the application.

**I. Response to Double Patenting Rejection**

Claims 1 and 3-5 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as allegedly being unpatentable over claims 1 and 3-5 of co-pending application No. 10/518,934.

Applicants defer responding to the provisional obviousness-type double patenting rejection.

**II. Response to Claim Rejections – 35 U.S.C. § 102**

**A. JP 10-110401**

Claims 1-7 are rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by JP '401.

**B. US 6,051,614 (Hirai et al)**

Claims 8 and 10-18 are rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Hirai et al.

**C. US 4,484,992 (Bühler et al)**

Claims 1-8, 12 and 19-23 are rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Bühler et al.

Applicants submit that the cited references do not anticipate the presently cited invention. Claims 1 and 8 are amended herein to recite that the photocatalyst has a capsule structure comprising a cadmium compound shell and a void.

On the other hand, the catalyst described in JP '401 is not a capsule structure as recited in amended claims 1 and 8. In JP '401, the capsule structure is described as "an encapsulation of so-called semiconductor particle, formed by covering individual particle with an organic polymer thinly and uniformly with a thickness in the Angstrom order" (see [0005]). Thus, the capsule structure described in JP '401 has a core of a semiconductor particle and a shell of an organic polymer.

With respect to Hirai et al, Applicants note that the corresponding Japanese application constituting the basis of Hirai et al is laid open by JP 5-271718 (hereinafter indicated as JP '718). JP '718 discloses mixing a surfactant and a non-aqueous solvent to an aqueous dispersion of metal (compound) particles, and to further add a water-soluble salt of an inorganic acid/organic acid thereby displacing the metal (compound) particles to the non-aqueous solvent phase, thus obtaining a non-aqueous dispersion of the metal (compound) particles.

The description at paragraph [0019] of Hirai et al (US '614) merely describes that "an aqueous dispersion of fine particles of a metal sulfide such as copper sulfide, cobalt sulfide, nickel sulfide or cadmium sulfide can be obtained by reacting a sulfurizing agent such as sodium thiosulfate, sodium sulfide, ammonium sulfide, hydrogen sulfide or zirconium sulfide with an aqueous solution of a metal salt corresponding to the desired metal species". Thus, Hirai et al (US '614) is not related to the present invention and does not disclose a photocatalyst having a capsule structure comprising a cadmium compound shell and a void, as recited in the present claim.

Bühler et al also fails to disclose teach or suggest a capsular structure comprising a cadmium compound shell and a void as presently recited in amended claims 1 and 8.

In view of the above, neither one of JP '401, Hirai et al nor Bühler et al anticipates the presently claimed invention. Accordingly, Applicants respectfully request withdrawal of the rejections under 35 U.S.C. § 102.

### **III. Information Disclosure Statement**

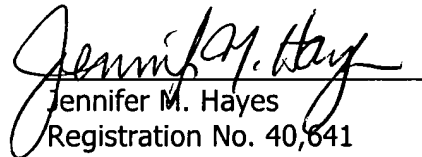
Applicants submit machine English translations of the Japanese patents listed in the PTO/SB/08 form filed with the Information Disclosure Statement of December 22, 2004. These translations are listed on the PTO/SB/08 form submitted with the Information Disclosure Statement filed concurrently herewith.

#### **IV. Conclusion**

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

  
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**23373**

CUSTOMER NUMBER

Date: March 7, 2006